



EUGENE OBREZKOV

Software Engineer

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Skills

Problem Solving



Able to make an analysis of a problem to identify the cause. Once the cause is identified, I am researching & developing possible solutions. Ideally, few working solutions, to be able to identify the most efficient ones, while discussing them with the team.

Node.js/JavaScript



Having a strong experience with Node.js for 7 years and continue improving in the area. Sometimes, contributing to it. Developed few npm packages with 2M+ total downloads.

Unix/Linux



Starting from Debian-based distributions to Gentoo and Arch Linux, soon I was interested in Linux From Scratch. Know a little bit of each, had developer experience for 5+ years on them. Though already switched to MacOS and it is my current workstation.

DevOps



Able to automate developers routine, starting from lint checks on CI to delivering the product to the cloud. Using mostly CI configurations for that or by writing my own Bash scripts that are integrated into CI flow.

Compilers/Interpreters



Have an overview understanding of how compilers work (from lexical analysis to machine code). Wrote few simple parsers, alongside with interpreters for the parsed code.

Summary

Software Engineer with analytical and problem-solving skills. Believes that programming language does not matter, all the matter is algorithms/concepts/critical thinking.

Passionate about software internals, including compilers, virtual machines, operating systems.

Work experience

2020 - Present Software Engineer

Wix

Achievements:

TBA

Technical Skills:

Node.js, JavaScript, TypeScript, Kubernetes, ...

2017 - 2019 Senior Software Engineer

elastic.io

Achievements:

- Proven problem-solving skills related to production infrastructure, including Docker, orchestration systems like Mesos/Kubernetes, performance issues;
- Reduced time that is required for a preparing release from a man/day to man/hour by automating the building process;
- An average time of one-shot containers was reduced from the 30s to 10s by fixing issues with signals passing from orchestrator to a process;
- Made a more flexible/granular authorization model by migration from classic RBAC to Ubi-RBAC that allows giving more granular permission in the multi-tenant system;

Technical Skills:

DC/OS, Kubernetes, Mesos, Marathon, Docker, RabbitMQ, AMQP, MongoDB, GCP, Node.js, JavaScript, TypeScript, Bash, Express, Mongoose, Mocha, Jasmine, Jest, ESLint, Hadolint, Shellcheck

2016 - 2017 Software Engineer

Dev-Pro

Achievements:

- Built an npm library, that simplified communication with hardware devices (*payment terminals, thermal/impact printers, etc*) for its consumers, reducing their headache about binary structures and improving the overall performance of the team;
- Implemented a broader set of transports the library can use to send those binary structures to a device, by implementing adapters over popular Node.js native add-ons. These including Ethernet (TCP/IP), USB, RS-232, Bluetooth;
- The resulted library was used to implement a Point of Sale system and hide the complexity of hardware communication from PoS team;

Technical Skills:

Node.js, JavaScript, npm, Binary Structures, Cordova, NW.js, Electron

2013 - 2016 Software Engineer

Onix-Systems

Achievements:

- WordPress plugin to create custom banners that are showing up on their WordPress site based on the settings;
- Codebase migration from WordPress plugin to standalone web-service written in PHP and migration again from PHP to Node.js;
- During high-load peaks, was responsible for investigating and fixing the

Technical Skills

Tools/Software

Git, VSCode, Vim + NeoVim + SpaceVim, WebStorm, iTerm, Fish Shell

Languages

JavaScript (*expert*), TypeScript (*beginner*), Rust (*beginner*), Bash (*beginner*), C++ (*beginner*)

Research and Planning

Identifying Problems, Gathering Information, Critical Thinking

Cloud-Based Technologies

Docker, Kubernetes, DC/OS, Mesos, Marathon, GCP, RabbitMQ, MongoDB, fluentd

reasons from a bug in the code to changing how components are interacting in infrastructure;

- Architecture design, code review, technical leadership;

Technical Skills:

PHP, WordPress, Node.js, JavaScript, REST API, AWS, jQuery, SVG-edit, DOM Manipulation, HTML generation;

2012 - 2013 Software Engineer

MAA

Achievements:

- Rendering real-time data from GPS device to have a possibility track the vehicle;
- Aggregation data from GPS devices and using it to build track history;

Technical Skills:

PHP, JavaScript, jQuery, OpenLayers, Google Maps API, OpenStreetMap API

Education

2009 - 2014 Master's Degree in Computer Science

[Volodymyr Vynnychenko Central Ukrainian State Pedagogical University](#)

Projects

When I do have leisure time, sometimes I like to play around with new technologies or learn something new. You can read more about the so-called pet projects I made during leisure time (*my favorite ones*).

- **A real hexapod** - constructed from plastic and servos. Its brains are based on Atmega and written in C++ language. You can check the Instagram video to see how it walks [[video](#), [sources](#)]
- **Simple OS** - transitions from 16-bit mode to 64-bit mode, few drivers for keyboard, video output and a simple shell that understands echo command [[sources](#)]
- **Syntax highlighter for JSONata** (CodeMirror) - JSONata is a query language for JSON object with its own expressions and statements. I made a plugin for CodeMirror editor that able to highlight syntax of JSONata [[demo](#), [sources](#)]
- **High-performance API for a cursor in a terminal** - written in JavaScript, exports the API you can use for cursor manipulation in your terminal. It is fast enough to be able to draw YouTube video in real-time, check the demo [[demo](#), [sources](#)]
- **An interpreter for a subset of Pascal language** - recursive descent parser, written by hand, AST, variable lookups, symbol table, interpret. All of it was implemented as part of my compilers education [[sources](#)]
- **A virtual machine for a subset of JavaScript language** - a virtual machine that is able to parse and interpret the subset of JavaScript language [[sources](#)]

Though, I am an outside contributor into [acorn](#), [Node.js](#), and others not so popular open-source projects.

Publications

When I am not good enough for some conference to give a talk, do not have enough time to make preparations, or by any other reasons I can not share my knowledge there, I am sharing it in my technical blog - [blog.ghaiklor.com](#).

I'd like to pay your attention to some of my top articles:

- [How does Node.js work](#) - Node.js internals, how it integrates with V8, what parts of V8 API is consumed to bring Node.js real;
- [Profiling Node.js applications](#) - useful CLI flags in Node.js that you are able to use for CPU profiling and finding hot spots of the code;
- [How to implement your own bootloader](#) - an introduction into Assembly language and how to create a bootloader that prints "Hello, World";
- [How V8 optimizes JavaScript code](#) - this one is old, and techniques described here are

already dead or wrong. Though, it remains one of the top articles by views;

- [From NAND Gate to Pong Game](#) - I've passed a course on Coursera, which is called [nand2tetris](#). The course itself is about building your own computer from the ground up. In this article I talk about computers and how does they implemented.

Public Speeches

I am passionate about giving a talk, share my knowledge and research results with the community. Anything, small or big, from tips at a workflow to research results at a job. If that is interesting to the community, I am glad to share it.



How does NodeJS work? - E... REST API Development - Eug. Why NodeJS is so fast? - Eu...



Functional Paradigm in Java.. How does V8 optimize Java...